

REMARKS

This application has been amended in a manner to place it in condition for allowance.

Claims 1 and 13 are amended to recite types of water soluble organic resin.

Accordingly, claims 4, 6-8, 11, and 16-18 are also amended, and claims 5 and 15 are cancelled.

Support for the amendment to the claims may be found, for example, in the present specification on page 7, lines 14-18 and page 11, line 4 to page 12, line 18.

Claims 1-4, 6-14 and 16-20 are pending in the application.

The Official Action rejected claims 1-20 under 35 USC §112, second paragraph, for being indefinite. This rejection is respectfully traversed for the reasons that follow.

The position of the Official Action was that the phrase "glycoluril resin" is indefinite.

However, "glycoluril resin" is specified in the present specification on page 16, lines 1-8:

The glycoluril resin includes derivatives obtained by addition of methylol or butylol to all or part of 1-, 3-, 4-, and 6-amino groups of glycoluril; alkyl etherified derivatives in which the alkyl indicates methyl, methyl/ethyl, butyl, and the like; oligomers formed by condensation with a methylol group or the like; and alkyl derivatives thereof. Preferables are tetramethylolated glycoluril and its oligomers.

Moreover, examples of glycoluril resins are explicitly disclosed in the paragraph bridging pages 27 and 28 of the present specification:

Glycoluril resins A to D  
Resin A: Fully butylated glycoluril resin  
("Cymel 1170" manufactured by Mitsui Cytec Ltd.)  
Resin B: Alkylated (methylated and ethylated)  
glycoluril resin ("Cymel 1171" manufactured by Mitsui  
Cytec Ltd.)  
Resin C: Tetramethylolated glycoluril resin  
("Cymel 1172" manufactured by Mitsui Cytec Ltd.)  
Resin D: Fully methylated glycoluril resin  
("Cymel 1174" manufactured by Mitsui Cytec Ltd.)

Thus, the claims would have been definite to one skilled in the art, especially when read in light of the specification.

Therefore, withdrawal of the rejection is respectfully requested.

Claims 1-20 were rejected under 35 USC §103(a) as allegedly being unpatentable over UMINO et al. WO 03/042427 ("UMINO") in view of applicant's admissions. This rejection is traversed for the reasons discussed below.

UMINO differs from the claimed invention by at least two features: the steel sheet and the paint composition.

According to the claimed invention, Zn-Ni plating steel sheets are processed by blackening treatment. When a surface of a Zn-Ni plating steel sheet is subjected to blackening treatment, fine cracks are generated on the steel sheet surface. These

cracks will serve as the starting point for corrosion, and this lowers the sheet's resistance to corrosion.

To solve this problem of lowered corrosion resistance, the claimed invention utilizes a paint composition with a water soluble organic resin in combination with a water dispersible organic resin. The paint composition includes at least one type of water soluble organic resin selected from the group consisting of a polymer of a monomer containing a carboxyl group and a copolymer of a monomer containing a carboxyl group with another polymeric monomer.

Because a liquid state resin (solution of a water soluble organic resin) can permeate into the cracks and subsequently cure through drying, a resin coating film can be formed within the cracks (See, e.g., present specification, from line 2 from the bottom of page 10 to line 3, page 11). As a result, the starting point of corrosion in the cracks is curtailed and thereby excellent corrosion resistance has been achieved.

UMINO, however, applies a paint composition onto a steel sheet surface, and the steel sheet is heated for drying and curing to form coating films. UMINO does not apply a blackening treatment to the sheet, and, accordingly, does not have the same corrosion problems caused by cracks resulting from a blackening treatment.

Indeed, UMINO utilizes a water dispersible organic resin to form a resin coating film on the surface, which would be larger than the cracks caused by blackening treatment, and consequently, the resin of UMINO would be unable to permeate into such corrosion cracks to form a resin coating film within these cracks.

Thus, UMINO fails to disclose or suggest the same sheets as claimed, e.g., processed by blackening treatment, and, thus, fails to recognize the cracks and corrosion problem associated with these sheets, let alone a solution to the problem, e.g., providing a paint composition that can permeate cracks formed from the blackening treatment and subsequently form a resin coating film within the cracks.

The Official Action cited to the admissions in the present specification to remedy the shortcomings of UMINO for reference purposes. However, according to the present specification, blackening treatment results in a degradation of corrosion resistance, which could not be solved by the prior art without negatively impacting other features, such as a whitening appearance after press molding. See, e.g., the paragraph bridging pages 1 and 2 and page 4, line 8 to page 5, line 6 of the present invention.

Accordingly, one of ordinary skill in the art would have been discouraged from utilizing a blackening treatment, as the prior art recognized that corrosion problem caused by the

cracks formed by such a treatment could not be solved without adversely affecting other features.

Therefore, the proposed modification of UMINO does not render obvious the claimed invention, and withdrawal of the rejection is respectfully requested.

In view of the present amendment and the foregoing remarks, therefore, the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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